REMARKS

Status of the Application:

On July 10, 2002, Applicants filed a request for continuing prosecution application ("CPA"), along with a preliminary amendment. After entry of that preliminary amendment, claims 1, 4-11 and 13-28 currently are pending in this application. In an office action dated September 4, 2002, the Examiner rejected claims 1, 4-10, 14-16, 18-23 and 25-28 under 35 U.S.C. § 103(a) as being unpatentable over Bigham et al. (U.S. Patent No. 5,740,075) in view of Butler et al. (U.S. Patent No. 5,654,592). The Examiner also rejected claims 11, 13, 17 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Bigham et al. in view of Butler et al. and further in view of Skinner, Sr. (U.S. Patent No. 5,355,401).

The present amendment amends claims 1, 4-7, 11, 13-14, 17, 22-24 and 27-28 to address the Examiner's objection to informalities in claims 1 and 14. Applicants submit that the amendments are for purposes of clarity only and do not alter the scope of the claims in any respect. No claims have been added or canceled. Hence, after entry of this amendment, claims 1, 4-11 and 13-28 remain pending in the application.

Claims rejected under 35 U.S.C. § 103(a):

Claims 1, 4-10, 14-16, 18-23 and 25-28 were rejected as being unpatentable over Bigham et al. in view of Butler et al., and claims 11, 13, 17 and 24 were rejected as being unpatentable under 35 U.S.C. § 103(a) over Bigham, et al, in view of Butler et al., and further in view of Skinner, Sr. Applicants respectfully traverse the rejections and submit the following arguments in support of their position.

The Examiner correctly perceives that Bigham et al. fails to teach every limitation of the claims, including for example claim 1, which recites, *inter alia*, an "electrical power source comprising an alarm system configured to monitor the operation of the electrical power source and transmit electrical power source operation information to the telecommunications service provider." The Examiner contends, however, that Butler et al. teaches this limitation. Nonetheless, while Butler et al. (col. 3, lns. 15-17) does disclose that "should all customer supply lines 4 be unsuitable, or fail due to a power cut, and alarm signal is generated at the instigation of

the processor 6 . . . .," that reference nowhere discloses that the alarm is transmitted to the telecommunications service provider.

Moreover, transmitting the alarm signal to the service provider cannot be considered either inherent to the disclosure of Butler et al. or obvious in light thereof. Butler et al. (col. 3, lns. 18-19) teaches that the alarm signal "could be used to switch in battery backup power supplies (not shown) for the customer PSUs." For this, it is not necessary for the alarm signal of Butler et al. to be transmitted to the telecommunications service provider to be functional, and such transmission therefore cannot be considered to be inherently disclosed by Butler et al. In fact, Butler et al. actually teaches away from transmitting the alarm signal to the telecommunications service provider. If, as taught by Butler et al., the alarm signal can be used automatically to trigger a battery backup—which most likely would be sited at the power supply and certainly would remedy the loss of A/C power—there is no need for the alarm signal to be transmitted to the provider, since the problem already would have been solved by the time the provider received the alarm.

Likewise, Butler et al. (col. 3, lns. 1-9) discloses that, if a power line is unsuitable, the voltage monitoring circuit "reconfigures the switch 2 to avoid that supply line," and that the supply lines are continually rechecked and when suitable, automatically used again. Notably, the switch is located at the power supply (*see* Fig. 1), so that the described actions are taken without the need to transmit any information to the local office. In fact, Butler et al. nowhere indicates that such information is transmitted to the telecommunications service provider for any reason—all actions can be taken automatically and locally at the power supply. (Butler et al. does disclose that overall electrical use is downloaded to the exchange on a nightly basis for billing purposes, but this download obviously is not part of the alarm signaling process, not only because of the lengthy delay before transmission but also because the transmittal information really has nothing to do with the operation of the power source but instead deals merely with billing considerations).

Butler et al.'s disclosure thus fails to anticipate claim 1, which specifies that the electrical power source information is "transmit[ted] . . . to the telecommunications service provider . . . ."

For at least these reasons, then, Butler et al. neither anticipates claim 1's transmission of electrical power source information nor renders that limitation obvious. Hence, the cited references, either alone in combination, fail to create a *prima facie* case of obviousness with respect to independent claim 1, which therefore is allowable over the cited art. For similar reasons, independent claim 14 also is allowable.

Neither do the cited references disclose the limitations of dependent claims 4-10, 14-16, 18-23 and 25-28, which are patentable both as depending from allowable base claims and as being directed to specific novel substitutes. For example, even if Butler et al. could be considered to teach transmitting the alarm signal to the telecommunications service provider (which, as discussed above, it cannot), that reference still would fail to teach or suggest each of the limitations of claim 27. The Examiner correctly recognizes that neither Bigham et al. nor Butler et al. teach these limitations but contends that claim 27 is rendered obvious by Butler et al.

There is, however, no teaching, motivation or suggestion in either Bigham et al. or Butler et al. to modify the alarm signal of Butler et al. to cover the limitations of claim 27. For instance, Butler et al. fails to disclose that its alarm signal is anything other than a simple message (perhaps an electrical pulse, or even an audible tone, or ringing bell) that indicates that A/C power has in fact failed. In contrast, claim 27 recites that "the electrical power source operation information is selected from a group consisting of information about an AC power source, information about a rectifier's voltage, information about a converter's voltage, and information about a current limiter's current."

Given the only disclosed purpose of Butler et al.'s alarm signal—to "switch in battery backup power" (col. 3, lns. 18-19)—there would be no need to track or transmit information about a rectifier's voltage, a converter's voltage or a current limiter's current. Thus, even assuming Butler et al. properly could be combined with Bigham et al. to form a *prima facie* case of obviousness with respect to claims 1 or 14 (which it cannot), those references still would fail to render obvious dependent claims 4-10, 14-16, 18-23 and 25-28. Similarly, Skinner, Sr. fails to remedy the shortcomings of Bigham et al. and Butler et al, and claims 11, 13, 17 and 24 are

allowable. For at least these reasons, Applicants respectfully request that the rejections under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,

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APPENDIX A

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claim 1 has been amended as follows:

1. (Three Times Amended) A system for powering one or more devices in a fiber optic communication network, which transmits communication data between a telecommunications service provider and a remote user device, the system comprising:

an optical network node for converting the communication data from a digital optical state to a digital electrical state;

a fiber optic communication medium configured to transfer the communication data between the telecommunications service provider and the optical network node; and

an electrical power source configured to supply an electrical supply voltage to power the optical network node, the electrical power source comprising an alarm system configured to monitor the operation of the electrical power source and transmit electrical power source operation information to the telecommunications service provider.

Claim 4 has been amended as follows:

4. (Twice Amended) The system of claim 1, wherein the electrical power source is located proximate to the optical network node.

Claim 5 has been amended as follows:

5. (Twice Amended) The system of claim 1, wherein the electrical power source is remote from the optical network node and supplies power to a plurality of optical network nodes.

Claim 6 has been amended as follows:

6. (Twice Amended) The system of claim 1, wherein the electrical power source is located proximate to the telecommunications service provider.

Claim 7 has been amended as follows:

7. (Once Amended) The system of claim 1, wherein the electrical power source is located proximate to a digital loop carrier.

Claim 11 has been amended as follows:

11. (Twice Amended) The system of claim 17, wherein the electrical power source comprises a plurality of rectifiers, a plurality of converters, a plurality of current limiters, and a plurality of batteries configured to supply the DC voltage to the power source.

Claim 13 has been amended as follows:

13. (Twice Amended) The system of claim 1, further comprising one or more conducting mediums configured to connect the alarm system in the electrical power source to the optical network node for relaying power source operation information to the telecommunications service provider over the fiber optic communication medium.

Claim 14 has been amended as follows:

14. (Five Times Amended) A method for powering one or more devices in a fiber optic communication network, which transmits communication data between a telecommunications service provider and a user device, the method comprising:

transferring digital communication data between the telecommunications service provider and an optical network node;

converting the digital communication data from an optical state to an electrical state using the optical network node;

transmitting an electrical supply voltage from an electrical power source to the optical network node;

an alarm system in the electrical power source monitoring the operation of the electrical power source; and

transmitting electrical power source operation information from the alarm system to the telecommunications service provider.

Claim 17 has been amended as follows:

17. (Once Amended) The system as recited in claim 1, wherein the electrical power source comprises an AC power feed for providing power to the electrical power source during normal operation and a DC power feed for providing power to the power source when the AC power feed is inoperable.

Claim 22 has been amended as follows:

22. (Once Amended) The method as recited in claim 14, wherein the step of transmitting electrical power source operation information from the alarm system to the telecommunications service provider comprises transmitting alarm signals to the telecommunications service provider.

Claim 23 has been amended as follows:

23. (Once Amended) The method as recited in claim 14, wherein the step of transmitting electrical power source operation information from the alarm system to the telecommunications service provider comprises transmitting power level and operational data to the telecommunications service provider.

Claim 24 has been amended as follows:

24. (Once Amended) The method as recited in claim 14, wherein the step of transmitting an electrical supply voltage from ~~a~~ an electrical power source to the optical network node comprises an AC power feed supplying power to the electrical power source during normal operation and a DC power feed supplying power to the electrical power source when the AC power feed is inoperable.

Claim 27 has been amended as follows:

27. (Once Amended) The system of claim 1, wherein the electrical power source operation information is selected from a group consisting of information about an AC power

source, information about a rectifier's voltage, information about a converter's voltage, and information about a current limiter's current.

Claim 28 has been amended as follows:

28. (Once Amended) The method as recited in claim 14, wherein monitoring the operation of the electrical power source comprises monitoring information selected from a group consisting of information about an AC power source, information about a rectifier's voltage, information about a converter's voltage, and information about a current limiter's current.

APPENDIX B

PENDING CLAIMS

1. (Three Times Amended) A system for powering one or more devices in a fiber optic communication network, which transmits communication data between a telecommunications service provider and a remote user device, the system comprising:

an optical network node for converting the communication data from a digital optical state to a digital electrical state;

a fiber optic communication medium configured to transfer the communication data between the telecommunications service provider and the optical network node; and

an electrical power source configured to supply an electrical supply voltage to power the optical network node, the electrical power source comprising an alarm system configured to monitor the operation of the electrical power source and transmit electrical power source operation information to the telecommunications service provider.

2. (Canceled)

3. (Canceled)

4. (Twice Amended) The system of claim 1, wherein the electrical power source is located proximate to the optical network node.

5. (Twice Amended) The system of claim 1, wherein the electrical power source is remote from the optical network node and supplies power to a plurality of optical network nodes.

6. (Twice Amended) The system of claim 1, wherein the electrical power source is located proximate to the telecommunications service provider.

7. (Once Amended) The system of claim 1, wherein the electrical power source is located proximate to a digital loop carrier.

8. (As filed) The system of claim 1, wherein the remote user device is a telephone.

9. (As filed) The system of claim 1, wherein the remote user device is a computer.

10. (As filed) The system of claim 1, wherein the remote user device is a television.

11. (Twice Amended) The system of claim 17, wherein the electrical power source comprises a plurality of rectifiers, a plurality of converters, a plurality of current limiters, and a plurality of batteries configured to supply the DC voltage to the power source.

12. (Canceled)

13. (Twice Amended) The system of claim 1, further comprising one or more conducting mediums configured to connect the alarm system in the electrical power source to the optical network node for relaying power source operation information to the telecommunications service provider over the fiber optic communication medium.

14. (Five Times Amended) A method for powering one or more devices in a fiber optic communication network, which transmits communication data between a telecommunications service provider and a user device, the method comprising:

transferring digital communication data between the telecommunications service provider and an optical network node;

converting the digital communication data from an optical state to an electrical state using the optical network node;

transmitting an electrical supply voltage from an electrical power source to the optical network node;

an alarm system in the electrical power source monitoring the operation of the electrical power source; and

transmitting electrical power source operation information from the alarm system to the telecommunications service provider.

15. (Added in 12/17/01 Amendment) The system as recited in claim 1, wherein the optical network node comprises an optical network unit (ONU).

16. (Added in 12/17/01 Amendment) The system as recited in claim 1, wherein the optical network node comprises a digital subscriber line access multiplexer (DSLAM).

17. (Once Amended) The system as recited in claim 1, wherein the electrical power source comprises an AC power feed for providing power to the electrical power source during normal operation and a DC power feed for providing power to the power source when the AC power feed is inoperable.

18. (Added in 12/17/01 Amendment) The system as recited in claim 1, further comprising an electrical conducting medium configured to conduct the electrical supply voltage and the communication data from the optical network node to a the remote user device.

19. (Added in 12/17/01 Amendment) The system as recited in claim 18, further comprising a network interface device connected between the optical network node and the remote user device.

20. (Once Amended) The method as recited in claim 14, wherein the step of transferring digital communication data between the telecommunications service provider and the optical network node comprises transferring digital communication data between the telecommunications service provider and an optical network unit (ONU).

21. (Once Amended) The method as recited in claim 14, wherein the step of transferring digital communication data between the telecommunications service provider and the optical network node comprises transferring digital communication data between the telecommunications service provider and a digital subscriber line access multiplexer (DSLAM).

22. (Once Amended) The method as recited in claim 14, wherein the step of transmitting electrical power source operation information from the alarm system to the telecommunications service provider comprises transmitting alarm signals to the telecommunications service provider.

23. (Once Amended) The method as recited in claim 14, wherein the step of transmitting electrical power source operation information from the alarm system to the telecommunications service provider comprises transmitting power level and operational data to the telecommunications service provider.

24. (Once Amended) The method as recited in claim 14, wherein the step of transmitting an electrical supply voltage from an electrical power source to the optical network node comprises an AC power feed supplying power to the electrical power source during normal operation and a DC power feed supplying power to the electrical power source when the AC power feed is inoperable.

25. (Added in 12/17/01 Amendment) The method as recited in claim 14, further comprising conducting both the electrical supply voltage and the digital communication data along a single electrical conducting medium from the optical network node to the remote user device.

26. (Added in 12/17/01 Amendment) The method as recited in claim 25, further comprising network interface device interfacing between the optical network node and the remote user device.

27. (Once Amended) The system of claim 1, wherein the electrical power source operation information is selected from a group consisting of information about an AC power source, information about a rectifier's voltage, information about a converter's voltage, and information about a current limiter's current.

28. (Once Amended) The method as recited in claim 14, wherein monitoring the operation of the electrical power source comprises monitoring information selected from a group consisting of information about an AC power source, information about a rectifier's voltage, information about a converter's voltage, and information about a current limiter's current.